

REMARKS

In the Office Action mailed October 23, 2002, the Examiner rejected pending claims 1-11 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,201,948 to Cook et al. (“Cook”) in view of PR Newswire, “NetSage Showcases Social Intelligence Server for Relationship Management” (Feb. 9, 1999) (the “NetSage Article”). Applicants respectfully traverse.

The disclosure of Cook, which is titled “Agent Based Instruction System and Method,” describes a system for agent-based instruction (“ABI”) that is aimed at providing interactive, adaptive computer-assisted instruction to school students. The primary feature of the system is a “virtual tutor” or “agent” that “manages or controls instruction in a manner approximating a real tutor.” Cook at col. 4, lines 48-49. The agent “presents itself on-screen to the student with integrated, and optionally, animated multimedia persona, or preferably a plurality of persona,” id. at col. 5, lines 23-25, and comprises “components acting together to emulate a human tutor.” Id. at col. 9, lines 55-56. The agent “directly guides the student by exchanging communication with the student,” id. at col. 12, lines 30-31, and “[i]t is important that communication between the student and the agent be engaging.” Id. at col. 13, lines 40-41. Cook emphasizes that the agent emulates various “persona” during communications, where “persona means the effect conveyed to the student of the combined and coherent presentation of multiple display modalities to emulate a particular, apparently living, personality.” Id. at col. 13, lines 53-58. Examples of such persona include cartoon characters (“Study Buddies”), “Concept Coaches,” and “Electronic Learning Friends.” Id. at col. 13, line 65 - col. 14, line 4. While the agent utilizes a student’s interactions and performance history to guide the student’s instruction, the agent is subject to the control of the student’s teacher, a separate entity from the student: “the student’s teacher controls key parameters in the student data object, which in turn controls agent actions.” Id. at col. 28, lines 13-15.

The NetSage Article merely notes the use of Cook’s “virtual mentors” and “animated personae” in applications outside of education, such as e-commerce.

Unlike Cook and the NetSage Article, the invention of the present application does not utilize an “agent” or “virtual tutor” or “animated personae” to guide the user’s experience. Instead, the invention discloses the interpretation and dynamic application of rules to user state conditions in order to adaptively render and compose customized, content-rich pages from a

hierarchy of dynamic content objects. The dynamic content objects, which are created at a plurality of levels of abstraction, include dynamic pages, dynamic stacks within each page, dynamic content elements within each stack, and primitive objects within each content element.

The adaptive rendering of such content pages and content objects will differ for different users (and for the same user at different state conditions), based on criteria that include the user's profile, platform, and observed behavior data, as well as aggregate profile, platform, and behavior data, and the user's particular application state conditions. The performance of such adaptive rendering, through the interpretation of application rules, occurs dynamically. The system dynamically assesses a user's scenario (i.e., series of linked web pages with a specific goal) and determines the personalized content and organization of web pages displayed to the user, in order to guide the user toward successful completion of certain goals.

Unlike Cook and the NetSage Article, the present invention performs such adaptive rendering in an unobtrusive and seamless manner, such that the user, when presented with a series of web pages, is not aware that personalization is taking place (e.g., that the user is receiving a different set of web pages than any other user). The user does not interact with an agent that guides the user through the series of web pages; rather, it is the user's interactions with the system, as well as other information specific to the user and aggregated information of all users, that is used by the system to render content to be displayed to the user.

An example of the novel adaptive rendering disclosed in the present invention is the use of the user's platform and other technical information, such as bandwidth and configuration, as a factor in rendering the content to be presented to the user. The disclosure of this feature in the specification includes the following exemplary passages:

- Page 9, lines 13-18: "A second type of condition determines who will receive particular objects: i.e., which users 140 will receive the particular dynamically-rendered objects 110 (referenced implicitly as described above for the 'why' condition, or explicitly within the rule itself) based upon the satisfaction of one or more user conditions 120. User conditions 120 include user profile information, hardware and software platform and configuration data, and observed online behavior (e.g., user interactions, navigation paths, etc.)."
- Page 14, lines 12-17: "Delivery manager 230 makes relatively more concrete dynamic decisions than does scenario manager 210 or page manager 220 (though

also by interpreting application rules in the context of system state and individual/aggregate user information), such as whether a content element should be displayed as static text, or as an animated image or video. Such decisions might be based on a user's platform or bandwidth, as well as on a user's previously determined preference or response to certain different types of media content."

- Page 19, lines 15-19: "Based on the current scenario, particular application rules, and user information, the delivery manager (230 in FIG. 2) will dynamically decide at run-time which version and representation to present to a particular user. For example, the system may present the video representation to a user with a high bandwidth platform, while a user with a low bandwidth platform will receive a text representation."
- Page 21, lines 12-22: "The user profile and behavior information comprises several categories of data: standard profile information, demographic information, platform information, and behavior and interaction information. . . . Platform information includes client-side data regarding the user's computing environment that the system obtains when the user first enters the application, such as: browser type and version, operating system, hardware platform, bandwidth, available plug-ins, screen color depth, and JavaScript version (if Java-enabled). Note that most of the platform information is static, but some, such as bandwidth, is observed dynamically throughout a user's session."
- Page 25, line 28 - page 26, line 4: "For example, an experienced user who has previously visited the web site and who has a high-bandwidth computing environment may be 'pushed' through a path that includes pages displaying minimal help text and rich graphics and video. . . . At the other extreme, a first-time user who has a low-bandwidth computing environment may be 'pushed' through a path that includes pages displaying substantial help text, minimal graphics, and no video."
- Page 30, lines 21-26: "In determining the scenario and subsequent pages and links, scenario manager 210 might be directed by certain application rules to consider user-specific information regarding the user's computing environment (e.g., CPU,

operating system, current bandwidth, etc.) as well as observed information regarding pages previously visited by the user, including the user's behavior or prior actions on such pages (in the current or prior sessions)."

- Page 34, lines 22-25: "For example, the user's computing environment information (e.g., current bandwidth, presence of browser plug-ins, etc.) may be a factor (e.g., explicitly referenced in an application rule) in determining whether the user should be provided with video or audio versions of particular content elements."
- Page 35, lines 13-16: "In one embodiment of this invention, delivery manager 230 employs a weighting algorithm to make this determination, where different points are assigned to different factors (e.g., aspects of the user's computing environment, such as bandwidth, browser type and version, etc.)."
- Page 42, lines 15-20: "The system can appear to offer increased bandwidth to a user's connection by intelligently pre-fetching and delivering to the user's web browser the most likely next pages (and/or component content objects) while the current web page is being viewed. Such determinations can be based, for example, on individual and/or aggregate user profile and behavioral data, including user platform information (e.g., current bandwidth, operating system, browser/plug-ins, etc.)."

Neither Cook nor the NetSage Article discloses the dynamic, adaptive rendering of content to a user through the interpretation of rules, where factors including the user's platform and technical information are used in such rendering of content. Further, the combination of Cook and the NetSage Article does not obviate the claims of the present application because none of those references teaches or suggests the adaptive rendering of dynamic content objects which include dynamic pages, dynamic stacks within each page, dynamic content elements within each stack, and primitive objects within each content element, based on criteria that include the user's profile, platform, and observed behavior data, as well as aggregate profile, platform, and behavior data, and the user's particular application state conditions.

CONCLUSION

In view of the foregoing Remarks, Applicants respectfully submit that the present application is now in condition for allowance and respectfully request such action.

If the Examiner believes that a conference would facilitate prosecution of this application, the Examiner is invited to telephone Applicant's representative, undersigned, at the number set out below.

Respectfully submitted,



Justin Boyce

Dated: March 24, 2003

OPPENHEIMER WOLFF & DONNELLY LLP Reg. No. 40,920

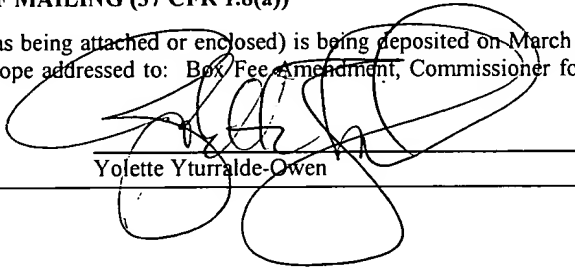
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Date: March 24, 2003



Yvette Yturralde-Owen